SLOVENSKI STANDARD
SIST EN 301 439:2000

01-julij-2000

Digitalne izboljġane brezvrviļ ne telekomunikacije (DECT) - Globalni sistem mobilnih komunikacij (GSM) - Zahteve za priključ evanje za dvozvrstno terminalsko opremo DECT/GSM

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); Attachment requirements for DECT/GSM dual-mode terminal equipment

Ta slovenski standard je istoveten z: **EN 301 439 Version 1.1.1**

ICS:

33.070.30	Digitalne izboljġane brezvrviļ ne telekomunikacije (DECT)	Digital Enhanced Cordless Telecommunications (DECT)
33.070.50	Globalni sistem za mobilno telekomunikacijo (GSM)	Global System for Mobile Communication (GSM)

SIST EN 301 439:2000 **en**

EN 301 439 V1.1.1 (1999-03)

European Standard (Telecommunications series)

Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); Attachment requirements for DECT/GSM dual-mode terminal equipment

Reference

DEN/DECT-010060 (dbo00ico.PDF)

Keywords

DECT, GSM, radio, terminal, regulation

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Project Digital Enhanced Cordless Telecommunications (DECT).

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC (as amended) laying down a procedure for the provision of information in the field of technical standards and regulations.

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Directive 98/13/EC of the European Parliamant and of the Council relating to telecommunications terminal equipment and satellite earth station equipment, including the mutual recognition of their conformity ("Directive 98/13/EC").

National transposition dates	
Date of adoption of this EN:	26 February 1999
Date of latest announcement of this EN (doa):	31 May 1999
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 1999
Date of withdrawal of any conflicting National Standard (dow):	30 November 1999

1 Scope

The present document specifies the additional technical characteristics to be provided by terminal equipment which is capable of connection with a DECT radio access (see note 1) to a public telecommunications network (see note 2) as well as with GSM radio access to GSM Public Land Mobile Networks (PLMN).

A DECT-terminal equipment comprises two elements, referred to as a Fixed Part (FP) and a Portable Part (PP), whereas a GSM terminal equipment is comprised of a mobile station (GSM MS). The objective of the present document is to ensure dual-mode operation of handsets comprised of a DECT PP and a GSM MS (Phase 2). These parts may, or may not, be separable.

The basic CTRs for DECT shall apply. These are the general attachment requirements [CTR 6], and for telephony the requirements for telephony applications [CTR 10] and requirements for the Generic Access Profile [CTR 22]. In addition, further CTRs may apply such as the CTRs for DECT access to GSM PLMN [CTR 36] and/or DECT access to ISDN [CTR 40].

The basic CTRs for GSM shall apply. These are the attachment requirements for Global System Mobile (GSM) mobile stations; Access [CTR 19 for Phase 2 and CTR 31 for multiband operation] and the requirements for telephony [CTR 20 for Phase 2 and CTR 32 for multiband operation].

The present document specifies all necessary additions to the Harmonized Standards rendered mandatory by the applicable CTRs for DECT/GSM dual-mode handsets.

As dual-mode handsets are expected to undergo a rapid technical development, the present documents may be amended at a later stage to meet these developments.

NOTE 1: Currently there are DECT profiles for interworking with ISDN (ETS 300 434 [15] and ETS 300 822 [16], which both allow access to ISDN networks and the services therein), GSM PLMN (ETS 300 370 [1] and others, which allow access to GSM PLMN and the services therein) and Generic Access to fixed networks (EN 300 444 [3], GAP, focusing on speech services). These are all covered by corresponding Harmonized Standards/CTRs. There also exists the CTM Access Profile (EN 300 824 [14], CAP).

NOTE 2: In the cases of the present document, the air interface may also be the network access.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] ETS 300 370: "Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); (DECT/GSM) Interworking Profile (IWP); Access and mapping (protocol/procedure description for 3,1 kHz speech service)".

[2] EN 301 242: "Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM integration based on dual-mode terminals".

[3] EN 300 444: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)".

[4] EN 300 607-1: "Digital cellular telecommunication system (Phase 2); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10)".

[5] TBR 6: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements".

[6] TBR 10: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements: Telephony applications".

[7] TBR 19: "European digital cellular telecommunications system (Phase 2); Attachment requirements for Global System for Mobile communications (GSM) mobile stations; Access".

[8] TBR 20: "European digital cellular telecommunications system (Phase 2); Attachment requirements for Global System for Mobile communications (GSM) mobile stations; Telephony".

[9] TBR 22: "Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) applications".

[10] TBR 31: "Digital cellular telecommunications system (Phase 2); Attachment requirements for mobile stations in the DCS 1 800 band and additional GSM 900 band; Access".

[11] TBR 32: "Digital cellular telecommunications system (Phase 2); Attachment requirements for mobile stations in the DCS 1 800 band and additional GSM 900 band; Telephony".

[12] TBR 40: "Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment for DECT/ISDN interworking profile applications".

[13] 98/13/EC: "Council Directive of 12 February 1998 on the approximation of the laws of the Member States concerning telecommunications terminal equipment and satellite earth station equipment, including the mutual recognition of their conformity" (Terminal Directive).

[14] EN 300 824: "Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP)".

[15] ETS 300 434: "Digital Enhanced Cordless Telecommunications (DECT) and Integrated Services Digital Network (ISDN) interworking for end system configuration".

[16] ETS 300 822: "Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Interworking and profile specification".

[17] TBR 36: "Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT access to GSM Public Land Mobile Networks (PLMNs) for 3,1 kHz speech applications".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the definitions given in TBR 6 [5], TBR 10 [6], TBR 19 [7], TBR 20 [8], TBR 22 [9], TBR 31 [10], TBR 32 [11] and TBR 40 [12] apply, along with those found in EN 301 242 [2].

active communication: a state, where a communication link has been established between the DMT and a fixed part in either GSM or DECT mode.

automatic switched operation: the DMT is in either GSM or DECT mode and switches automatically between these modes when it looses current coverage or finds preferred coverage.

background scanning: the process whereby a DMT in manually or automatically switched operation attempts to identify the existence of stable networks in the mode other than the one it is in to which the terminal has access rights.

dual mode terminal: a terminal comprising both GSM and DECT parts.

GSM coverage: the sum of all GSM Public Land Mobile Network (PLMN) coverages where the DMT has at least limited service.

GSM: in the present document, the GSM part of a DMT can be GSM 900, Digital Cellular System 1800 (DCS 1800) or GSM/DCS dual band.

manually switched operation: the DMT is in either GSM or DECT mode and switches between these modes only after interaction with the user.

mode selection: a DMT based procedure, whereby operating mode, GSM or DECT, is chosen.

mode: a DMT has two modes, GSM and DECT. In GSM mode the DMT behaves as a GSM Mobile Station (MS) and in DECT mode the DMT behaves as a DECT Portable Part (PP).

parallel operation: the DMT has both GSM and DECT modes activated at the same time. It is capable of being location registered both to a DECT FP and a GSM PLMN at the same time and is capable of at least receiving simultaneously in both GSM and DECT modes.

preferred mode: either DECT or GSM is set to be the preferred mode. The DMT in automatic switched operation automatically switches to the preferred mode when it finds a suitable network in that mode and the DMT in parallel operation uses the preferred mode for outgoing calls.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ARI	Access Rights Identity (see PARI, SARI and TARI)
CAP	CTM Access Profile
Cat	Category
CTM	Cordless Terminal Mobility
CTR	Common Technical Regulation
DCS	Digital Cellular System
DECT	Digital Enhanced Cordless Telecommunications
DMT	Dual-Mode Terminal
FP	Fixed Part
GAP	Generic Access Profile
GIP	DECT/GSM Interworking Profile
GSM	Global System for Mobile communications
ICS	Implementation Conformance Statement
ISDN	Integrated Services Digital Network
MS	Mobile Station
PLMN	Public Land Mobile Network
PP	Portable Part
PSTN	Public Switched Telephone Network
RFP	Radio Fixed Part
RT	Requirements Tables
SIM	Subscriber Identity Module
TBR	Technical Basis for Regulation
TD	Terminals Directive

4 Introduction and how to use the present document

The present document contains references to existing DECT and GSM TBRs. It identifies the essential requirements of these TBRs which are applicable to DECT/GSM dual-mode terminals, with any required additions or modifications. It introduces some new essential requirements specific to DECT/GSM DMTs. It identifies the test specifications to be applied to demonstrate compliance to these existing and new essential requirements.

The present document does not cover the use of the DECT/GSM Interworking Profile (GIP) in the DECT mode of a DECT/GSM DMT. Single mode DECT PPs which implement the GIP profile are type approved according to TBR 36 [17]. Use of the GIP profile requires the support of the DECT Access Rights Identity (ARI) class D.

The present document does not permit the support of direct mode MS to MS or PP to PP communication. DECT PP to PP communication is within the scope of TBR 6 [5], and requires the support of DECT ARI class E. DECT/GSM DMTs type approved according to the present document are therefore receive first devices, in that they do not transmit on either DECT or GSM frequency bands without having detected and locked to a suitable FP or base station.

5 Requirements

The DECT/GSM DMT features, services and requirements, as defined in the DECT TBRs (TBR 6 [5], TBR 10 [6], TBR 22 [9] and TBR 40 [12]), the GSM TBRs (TBR 19 [7], TBR 20 [8], TBR 31 [10] and TBR 32 [11]) and in the DECT/GSM dual-mode Standard EN 301 242 [2], are considered to fall under the essential requirements specified in Article 4 of the Council directive 98/13/EC [13] applying to terminal equipment, given in the following subclauses. The column Terminal Directive Category (TD Cat) identifies the applicable clauses of Article 4 of directive 98/13/EC [13].

NOTE: This clause does not specify the exact status (e.g. mandatory or optional) of the listed features, services and requirements. This is specified in annex A.

The interpretation of TD Category column in all tables is as follows:

d falls under item (d) from Article 4 of Council directive 98/13/EC [13];
(protection of the public telecommunications network from harm)

e falls under item (e) from Article 4 of Council directive 98/13/EC [13];
(effective use of the radio frequency spectrum, where appropriate)

f falls under item (f) from Article 4 of Council directive 98/13/EC [13];
(interworking of terminal equipment with public telecommunications network equipment for the purpose of establishing, modifying, charging for, holding and clearing real or virtual connection)

g falls under item (g) from Article 4 of Council directive 98/13/EC [13].
(interworking of terminal equipment via the public telecommunications network, in justified cases)

5.1 DECT requirements

5.1.1 Application of TBR 6

All the essential requirements of TBR 6 [5] apply for DECT/GSM DMTs.

5.1.2 Application of TBR 10

All the essential requirements of TBR 10 [6] apply for DECT/GSM DMTs.

5.1.3 Application of TBR 22

All of the essential requirements of TBR 22 [9] apply to DECT/GSM DMTs.